



For additional information on toxicity, please refer to Section 11.

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#### Section 4 - First Aid Measures

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##### ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

##### INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

##### DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

##### EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

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#### Section 5 - Fire Fighting Measures

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##### FLASH POINT

144 °F 62.2 °C Method: closed cup

##### EXPLOSION LIMITS

Lower: 7 % Upper: 70 %

##### AUTOIGNITION TEMP

N/A

##### FLAMMABILITY

N/A

##### EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

##### FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.  
Specific Hazard(s): Combustible liquid. Emits toxic fumes under fire conditions.

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#### Section 6 - Accidental Release Measures

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##### PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

##### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

##### METHODS FOR CLEANING UP

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

##### ENVIRONMENTAL PRECAUTION(S)

Do not allow material to enter drains or water courses.

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## Section 7 - Handling and Storage

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### HANDLING

User Exposure: Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Do not use if skin is cut or scratched. Wash thoroughly after handling.

### STORAGE

Suitable: Keep tightly closed. Keep away from heat, sparks, and open flame.

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## Section 8 - Exposure Controls / PPE

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### ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

### PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

### GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

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## Section 9 - Physical/Chemical Properties

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Appearance	Physical State: Liquid	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	100 °C	760 mmHg
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	40 mmHg	39 °C
Vapor Density	1 g/l	
Saturated Vapor Conc.	N/A	
SG/Density	1.08 g/cm <sup>3</sup>	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	144 °F 62.2 °C	Method: closed cup
Explosion Limits	Lower: 7 % Upper: 70 %	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	Solubility in Water: Miscible.	

N/A = not available

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## Section 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.

Materials to Avoid: Alkali metals, Reducing agents, Amines, Peroxides  
Incompatible with: aniline, phenol, isocyanates, anhydrides, Acids, Acid chlorides, Acid anhydrides, Oxidizing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Nature of decomposition products not known.

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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## Section 11 - Toxicological Information

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### ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: Readily absorbed through skin. Harmful if absorbed through skin.

Eye Contact: May cause eye irritation.

Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. Harmful if inhaled.

Ingestion: Harmful if swallowed.

### SENSITIZATION

Respiratory: May cause allergic respiratory reaction.

Skin: May cause allergic skin reaction.

### TARGET ORGAN(S) OR SYSTEM(S)

Central nervous system. Heart. Liver. Kidneys. Eyes.

### SIGNS AND SYMPTOMS OF EXPOSURE

Dizziness. Gastrointestinal disturbances. Nausea, headache, and vomiting. Ingestion can cause: Methyl alcohol may be fatal or cause blindness if swallowed. Cannot be made non-poisonous.

Weakness. Coughing, chest pains, difficulty in breathing. May cause convulsions. Unconsciousness. Drowsiness. Confusion.

### CHRONIC EXPOSURE - CARCINOGEN

Result: OSHA carcinogen. This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

### OSHA CARCINOGEN LIST

Rating: Potential cancer hazard.

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## Section 12 - Ecological Information

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### ACUTE ECOTOXICITY TESTS

Test Type: LC50 Fish

Species: Onchorhynchus mykiss (Rainbow trout)

Time: 96 h

Value: 19,000 mg/l

Test Type: EC50 Daphnia

Species: Daphnia magna

Time: 48 h  
Value: 24,500 mg/l

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## Section 13 - Disposal Considerations

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### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

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## Section 14 - Transport Information

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### DOT

Proper Shipping Name: Combustible liquid, n.o.s.  
UN#: NA1993  
Class: COMBUSTIBLE LIQUID  
Packing Group: Packing Group III  
Hazard Label: None  
PIH: Not PIH

### IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

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## Section 15 - Regulatory Information

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### EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xn  
Indication of Danger: Harmful.  
R: 20/21/22-40-43  
Risk Statements: Harmful by inhalation, in contact with skin and if swallowed. Limited evidence of a carcinogenic effect. May cause sensitization by skin contact.  
S: 36/37  
Safety Statements: Wear suitable protective clothing and gloves.

### US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Harmful.  
Risk Statements: Harmful by inhalation, in contact with skin and if swallowed. Harmful: possible risk of irreversible effects through inhalation, in contact with skin, and if swallowed. May cause sensitization by inhalation and skin contact.  
Safety Statements: Do not breathe vapor. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
US Statements: Potential cancer hazard. Contains formaldehyde. Readily absorbed through skin. Combustible liquid. Target organ(s): Eyes. Kidneys. Calif. Prop. 65 carcinogen.

### UNITED STATES REGULATORY INFORMATION

SARA LISTED: Yes  
NOTES: This product is or contains a component that is subject to SARA313 reporting requirements.

### UNITED STATES - STATE REGULATORY INFORMATION

OSHA Remarks: OSHA-regulated carcinogen. See CFR title 29 part 1910.

### CALIFORNIA PROP - 65

California Prop - 65: This product is or contains chemical(s)

known to the state of California to cause cancer.

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: No

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Section 16 - Other Information

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DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.